

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** XXX **ISSUE:** Standard
2. **DRD NO.:** **STD/CM-AD**
3. **DATA TYPE:** 2/3
4. **DATE REVISED:**
5. **PAGE:** 1/4
6. **TITLE:** Functional Configuration/Physical Configuration Audit Documentation
7. **DESCRIPTION/USE:** To support the Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA). The FCA is an audit to verify performance of the CI against approved configuration documentation. The Physical Configuration Audit (PCA) is an audit of the configuration documentation and quality control records to ensure the as-built or as-coded configuration is defined in the documentation.
8. **OPR:** ED03 9. **DM:**
10. **DISTRIBUTION:** See Attachment 2
11. **INITIAL SUBMISSION:** See Attachment 2
12. **SUBMISSION FREQUENCY:** Per configuration audit
13. **REMARKS:** MSFC will document audit planning and provide it to the contractor prior to the audit.
14. **INTERRELATIONSHIP:**
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** Functional Configuration/Physical Configuration Audit Documentation contains the required documentation necessary to support the configuration audit for a configuration item (CI).
- 15.2 **APPLICABLE DOCUMENTS:**
MSFC-STD-3394 *Standard for Contractor Configuration Management MSFC Programs/Projects*
- 15.3 **CONTENTS:** Test and other required data for the FCA shall be that collected from the test of the configuration of the item that is to be formally accepted. The Physical Configuration Audit (PCA) is an audit to verify that the as-built configuration reflects the required physical characteristics documented in the as-designed configuration. Configuration and quality control records and other documents defining the as-built or as-coded configuration is defined in the documentation shall be provided.

MSFC-STD-3394 provides guidelines on documentation required for the FCA and PCA. See Attachment 1 for documentation required for the audits.

Additional documentation requirements to be provided are:

- a. Agenda - The agenda shall specify the date, time and place for the scheduled audit, specific review items, supporting documentation, and key participants. Submit approved copies at the review. See Attachment 2.
- b. Presentation Charts - Presentation charts shall be submitted at the start of the audit. They shall summarize the details contained in the data package and identify compliance with the contract requirements. See Attachment 2 for distribution and availability of data.

DRD Continuation Sheet

TITLE: Functional Configuration/Physical Configuration Audit **DRD NO.:** STD/CM-AD
Documentation

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15. **DATA PREPARATION INFORMATION (CONTINUED):**

- c. Minutes - The minutes shall contain a description of the audit with sufficient detail to enable the audit to be made a matter of record. The minutes shall include the presentation charts, a listing of Findings, action items with actionee and suspense (closure) data, and identification of the documents which describe the approved baseline established at the conclusion of the PCA. See Attachment 2 for distribution and availability of data.
- d. Findings - showing action items, actionees, suspense dates and closure status shall be submitted. See Attachment 2 for distribution and availability of data.

15.4 **FORMAT:** Contractor format is acceptable.

15.5 **MAINTENANCE:** As required to correct errors and to maintain findings closure status.

Configuration Audit Required Data

Documentation required for FCA

(As applicable)

- Specifications.
- Drawings and parts list.
- ECPs and DARs incorporated and pending.
- Specification and drawing tree.
- Fracture control plan.
- Structural dynamics, analyses, loads, and models documentation (updated).
- Materials Usage Agreement (MUAs).
- Material Identification Usage List (MIUL).
- Certification of Qualification(s) (COQ's).
- Verification procedures and requirements.
- Complete list of successfully accomplished tests and test results.
- Complete list of successful tests if detailed test data are not recorded.
- Complete list of tests required but not performed.
- Software verification data.
- Software development documents.
- Software version description.
- Critical Design Review (CDR) RIDs and dispositions.
- Mission constraints.
- Nonconformance reports.
- Interface control drawings/documents.
- Hazard analysis/risk assessment.
- Test plans and procedures.
- Test reports.
- Verification closures.
- Verification tracking log.
- Analysis reports.
- ALERTS tracking log.

Documentation required for the PCA

(As applicable)

- Final version of all specifications.
- Product drawings and parts list.
- Configuration accounting and status reports.
- Final version of all software documents.
- Final version of software version description document.
- Copy of all FCA findings for each CI.
- List of approved and outstanding ECPs and DARs.
- Copies of ECPs and DARs as requested at the audit.
- Drawing and specification tree.
- Indentured parts list/as-designed configuration definition.
- As run test procedures (when applicable, include any test discrepancy records).
- Copy of parts tags or verification closure for verification items verified by inspection method.
- Manufacturing and inspection (build) records.
- Inspection records or inspection verification closures.
- As-built electronic data.
- Discrepancy Reports (DR's).
- Log Books.

NOTE: This list may require some tailoring for a specific contract. Example would be the deletion of software requirements if no software was required per the contract.

ATTACHMENT 2

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FCA/PCA Documentation
Distribution and Availability of Data

Document	Data Type	FCA Copies/ Availability	PCA Copies/ Availability
Agenda	2	One/15 days prior to audit, Approved copies at audit	One/15 days prior to audit, Approved copies at audit
Data Package	3	One/Two weeks prior to audit	One /Two weeks prior to audit
Presentation Charts	3	One for each attendee at audit	One for each attendee at audit
Minutes	2	One at audit/ copy to each attendee within two weeks	One at audit/one to each attendee within two weeks
Findings (generated at Reviews)	2	Provided as hard copy or electronically per the project specific Audit Plan.	Close out to be as specified in the project specific Audit Plan.

NOTE to STD/CM-AD

Sample Statement of Work words*: (*See SOW Tailoring Note on next page.)
Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA).
FCA/PCA shall be conducted in accordance with the requirements specified in MSFC-STD-3394. The data required to support the FCA and PCA shall be provided as defined in DRD STD/CM-AD.

The contractor shall provide the facilities and administrative support necessary for the audits. The requirements for the necessary support are defined in MSFC-STD-3394 and as follows: (1) provide support for maintaining a system for recording, processing, tracking, and reporting the status of all findings identified during the audit, corrective action and close out status; and (2) provide facilities and administrative support to the audit team(s).

*****Sample complete CM SOW section available from CDRM.*****

NOTE:

These instructions on DRD applicability are not a part of the DRD and should not be included in a DPD.

NOTE to STD/CM-AD (Continued)

SOW Tailoring Note

Tailoring of SOW words to include contractor self-assessment FCA/PCA: (Although the Government normally conducts and approves the FCA/PCA, it may be beneficial to the Government to limit personnel involvement in the detailed reviews and delegate to the contractor additional responsibility for the conduct of the FCA/PCA on a project-by-project basis. It is incumbent upon the MSFC Project Manager and the Project CM representative to assure that the project-specific additional responsibility is tailored into the SOW and DRD STD/CM-AD is tailored to reflect the additional documentation to be supplied.)

Suggested addition to SOW: To "Contractor Support" add: "(3) perform a self-assessment FCA/PCA."

Suggested addition to DRD: (a) Add to 15.3: "e. Summary Report - detailing contractor's results of the self-assessment activity," and (b) Add to attachment1: "Summary Report, data type 2, due within 15 days of FCA or PCA or FCA/PCA completion."

Sample complete CM SOW section available from CDRM.

NOTE:
**These instructions on DRD applicability
are not a part of the DRD and should
not be included in a DPD.**